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OPERATOR MANUAL
for the
Kodak X-Omatic IDENTIFICATION CAMERA
MODELS 4, 4L, and 4SL

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This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

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Section 1: Operator Orientation

Product Description

The *Kodak X-Omatic* IDENTIFICATION CAMERA, MODELS 4, 4L, and 4SL (referred to as the ID CAMERA from hereon), records patient identification data onto x-ray film in lighttight CASSETTES.

The ID CAMERA provides:

- Dual lenses for use with C-1 and C-1N windows for MODELS 4 and 4L
- Excellent image quality due to high-quality lenses
- Operation in **normal** room illumination
- The exact time and date of the exposure recorded on the film with customizable date and time formats
- The serial number of the camera is recorded on the film by all models in all lens positions except the C-1N lens position on the MODEL 4SL.
- Choice of both anterior-posterior (A-P) and posterior-anterior (P-A) imaging
- MODEL 4 records patient data on the upper corner of the film
- MODELS 4L and 4SL records patient data on the lower corner of the film

Environmental Requirements

The ID CAMERA will operate in the ambient room conditions normally encountered in an x-ray department:

- 15˚C to 30˚C (59˚F to 86˚F)
- 15% to 76% Relative Humidity

Cassettes

The ID CAMERA will function with the following CASSETTES:

- All sizes of *Kodak X-Omatic* CASSETTES with C-1 windows
- All sizes of *Kodaflex* CASSETTES with C-1 windows
- All sizes of *Kodak Min-R* 2 CASSETTES with C-1N windows

Power Requirements

Both MODELS will operate correctly from 100 to 240 V AC at 50 or 60 Hz. MODELS 4 and 4L come preset to operate on 120 V AC. Each ID CAMERA is internally switchable to operate on any of the following voltage ranges:

	Model	Frequency (Hz)	V AC 10%	Fuse
	4, 4L, and 4SL	50 or 60	100	UL/CSA 3 A
		50 or 60	120	UL/CSA 3 A
		50 or 60	220	TUV 1 A
		50 or 60	230	TUV 1 A
		50 or 60	240	TUV 1 A

- Do **not** connect the ID CAMERA to a power source that serves other equipment.
- Check that the ID CAMERA is connected to an outlet with a reliable earth ground.
- Use the correct FUSE for your current.

Operator Controls

Figure 1 **Model 4**

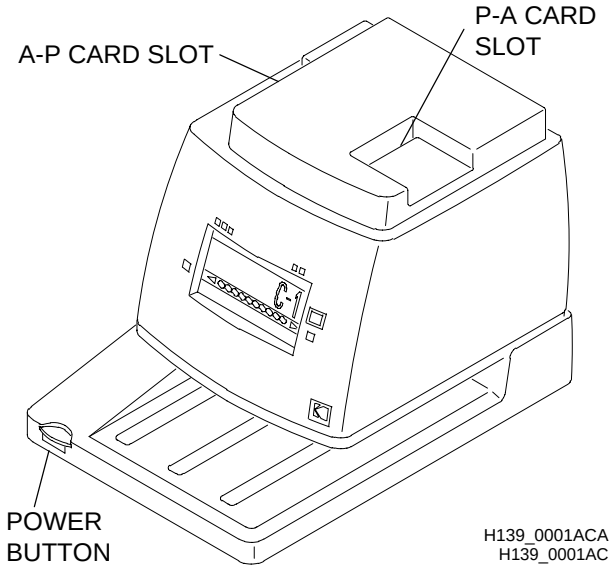


Figure 2 **Model 4L and 4SL**

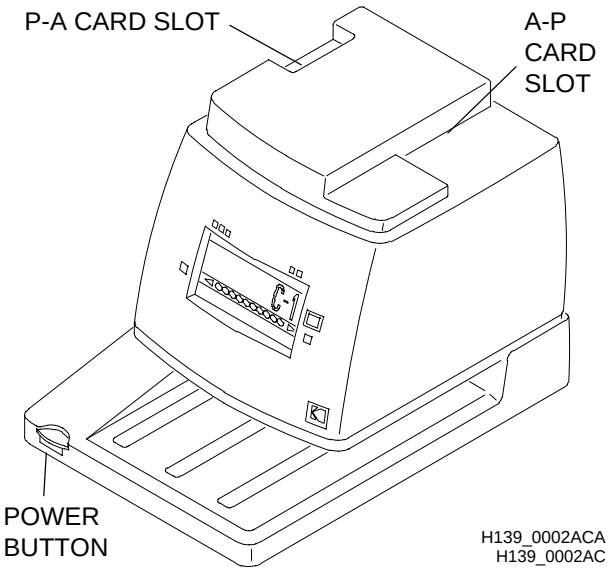
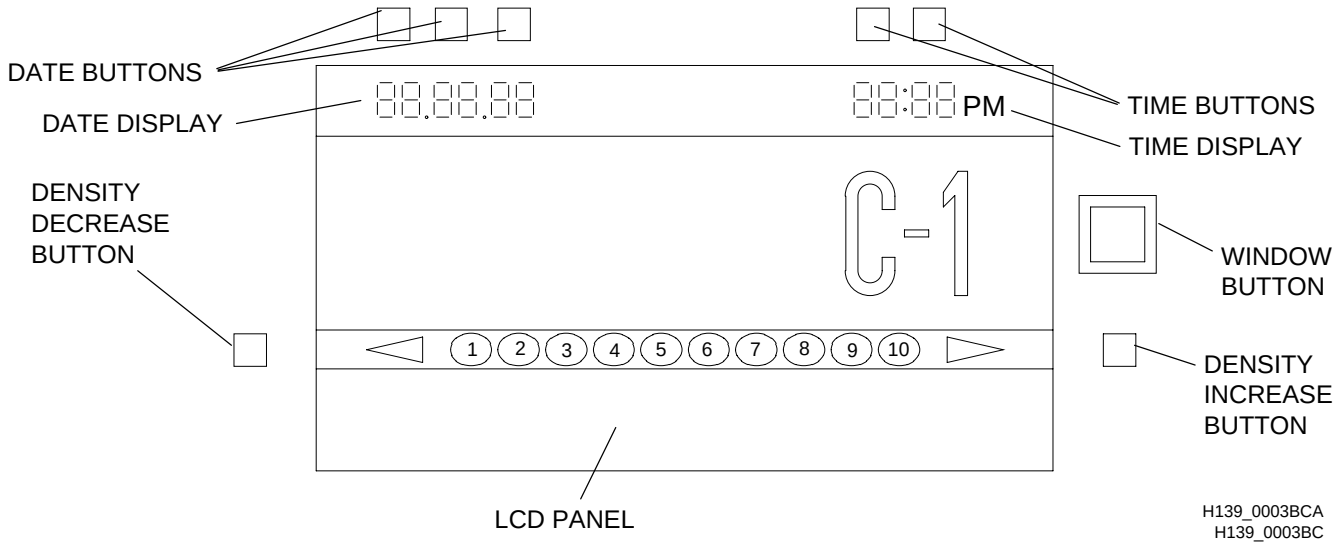


Figure 3 **Operator Controls for the ID Camera**



Section 2: Normal Operation

Applying Power to the ID CAMERA

[1] Check that the ID CAMERA is connected to an outlet with a reliable earth ground.

[2] Press the POWER BUTTON to energize the ID CAMERA.

Setting the Date and Time

Note

The date and time formats for your country are set by the installer at time of installation. Changes to the date or time **formats** require you to contact Kodak service.

[1] Check that the date and time are displayed correctly on the LCD PANEL on the ID CAMERA. See Figure 3.

[2] If necessary, change the date and time.

(a) Press the DENSITY INCREASE and DENSITY DECREASE BUTTONS at the same time. The values in the DATE and TIME DISPLAYS will flash.

(b) Press the DATE BUTTONS to select the date you want. The DATE BUTTONS are programmed to the date format for your country.

- For example, if your date format is month/day/year, the left BUTTON controls the month, the middle BUTTON controls the day, and the right BUTTON controls the year.
- If your date format is day/month/year, the left BUTTON controls the day, the middle BUTTON controls the month, and the right BUTTON controls the year.
- If your date format is year/month/day, the left BUTTON controls the year, the middle BUTTON controls the month, and the right BUTTON controls the day.

(c) Continue to press the appropriate DATE BUTTONS until the correct date is displayed on the LCD PANEL.

(d) Press the TIME BUTTONS to select the time you want. The TIME BUTTONS are programmed to your time format, either a 12- or 24-hour clock. In both the 12- and 24-hour time formats, the left TIME BUTTON controls the hour, and the right TIME BUTTON controls the minutes.

(e) Continue to press the TIME BUTTONS until the correct time is displayed on the LCD PANEL.

(f) Press the DENSITY INCREASE BUTTON only, approximately 2 - 3 seconds, until the DATE and TIME DISPLAYS stop flashing.

Note

- The DENSITY BUTTONS are deactuated while the DATE and TIME DISPLAYS are flashing.
- The time or date cannot be changed if a PATIENT ID CARD is in either the P-A or A-P CARD SLOT.

(g) Check that the density setting is correct. If necessary, change the density setting.

Clearing the Date and Time

To clear the date and time, or set the date and time to “0”, de-energize the CAMERA, press the DENSITY DECREASE BUTTON, and then press the POWER BUTTON. This clears, or resets, the microprocessor.

Recording Patient Data

[1] Prepare a patient IDENTIFICATION CARD for a CASSETTE that has exposed but unprocessed x-ray film.

[2] See the following list and illustration for the specifications of the IDENTIFICATION CARD.

- Minimum size: 15.24 x 5.72 cm (6 x 2¼ in.)

- Maximum size:

  small slot - 8.25 cm x 15.24 cm (3¼ x 6 in. or longer)

  large slot - 21 cm x 28 cm (8.½ x 11 in.)
- Maximum thickness: 0.305 mm (0.012 in.)
- Minimum thickness: 0.102 mm (0.004 in.)
- Required Card Color: Dull white with **black** ink

Note

- Standard white tab or Recommended Patient ID Cards with rounded corners are ideal.
- The dimensions of these cards are 8.3 X 18.7 cm (3¼ x 7⅜ in.).
- If the ink is not *black*, the density of the patient data on the film might not be correct.

Important

Bent or damaged white tab or data cards might affect patient data on the film.

Figure 4 **Recommended Patiend ID Card for Models 4, 4L, and the 4SL in the C-1 lens position**

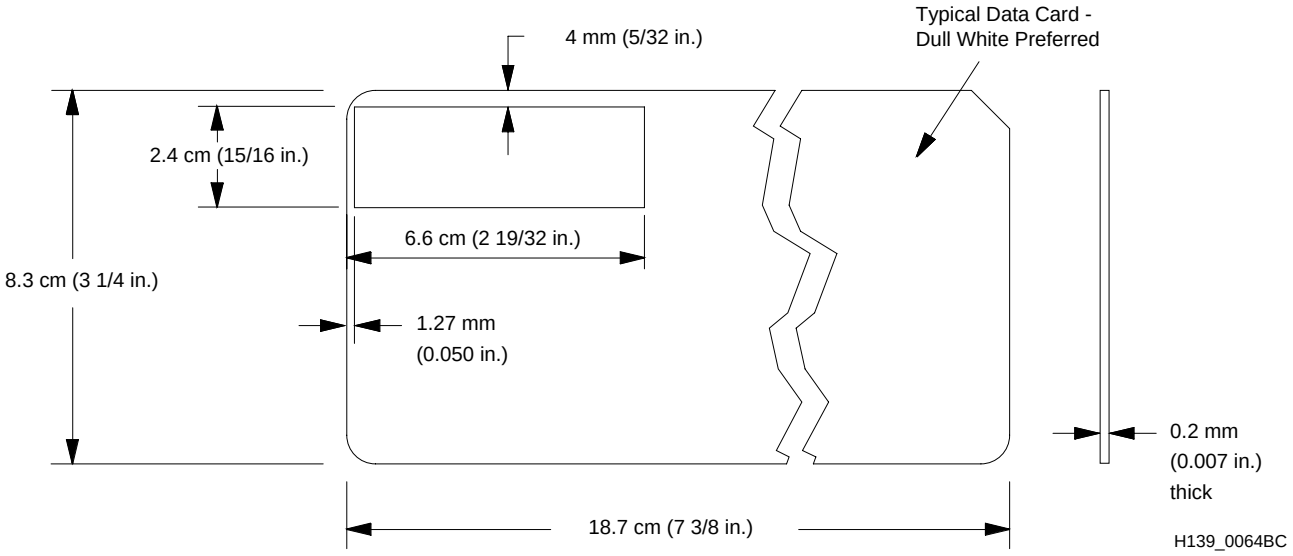
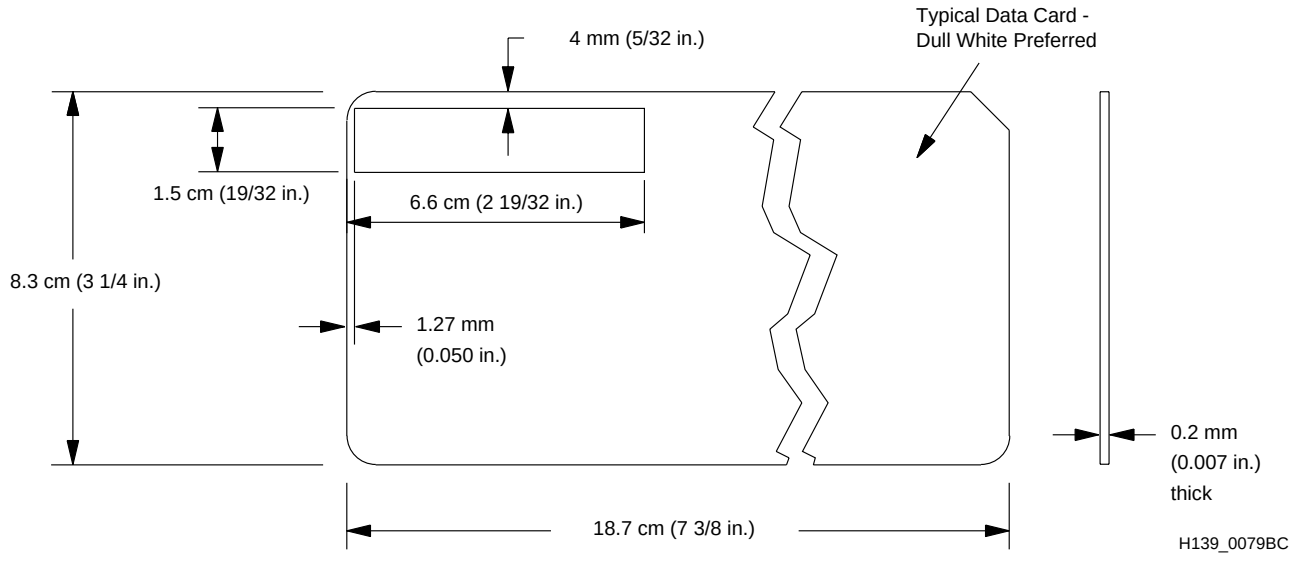


Figure 5 **Recommended Patient ID Card for Model 4SL in the C1N lens position**



Making an Exposure

Figure 6 **Model 4 with A-P Format Selected**

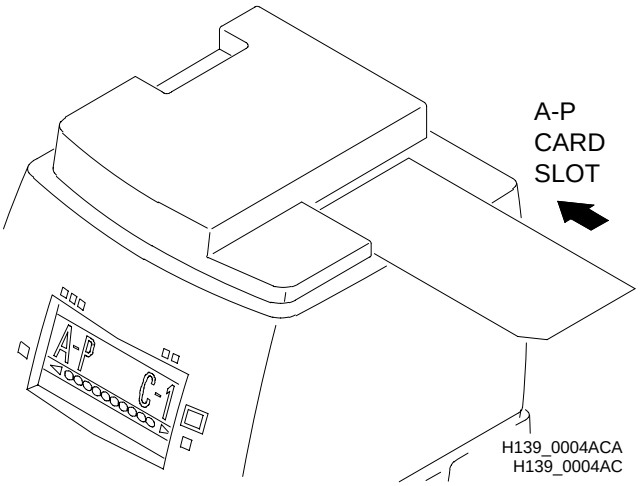
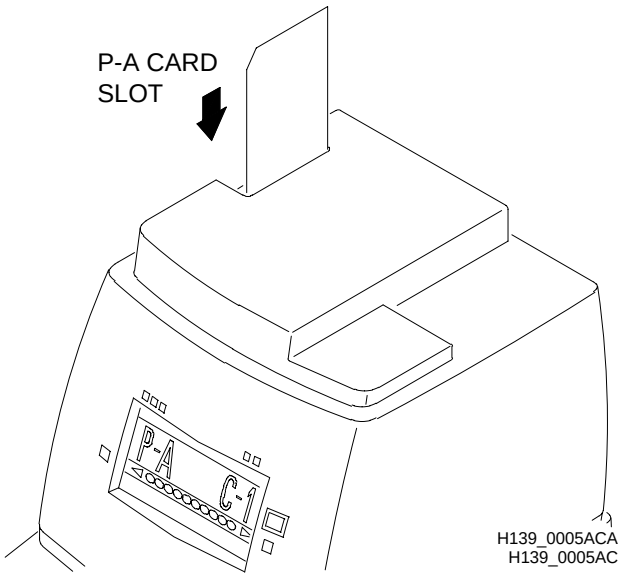


Figure 7 **Model 4 with P-A Format Selected**



[1] Choose the A-P or P-A imaging format by inverting and inserting an IDENTIFICATION CARD in the appropriate CARD SLOT with patient information toward the center of the ID CAMERA. You will hear a MOTOR move the MIRROR when changing from one imaging format to the other. See the illustrations below and check the A-P or P-A displayed on the LCD PANEL.

Figure 8 **Models 4L and 4SL with P-A Format Selected**

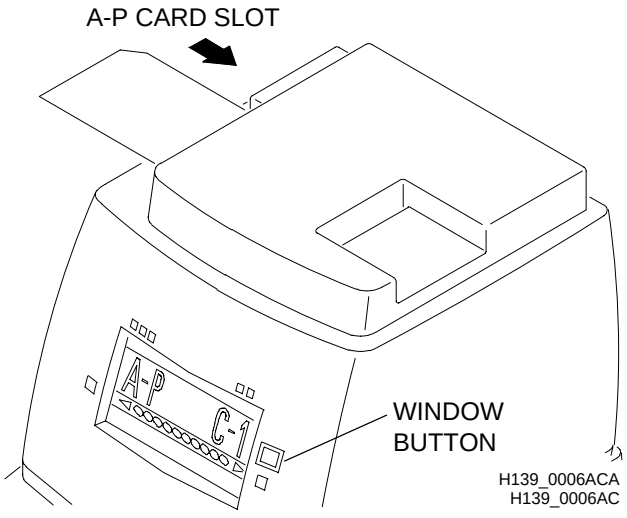
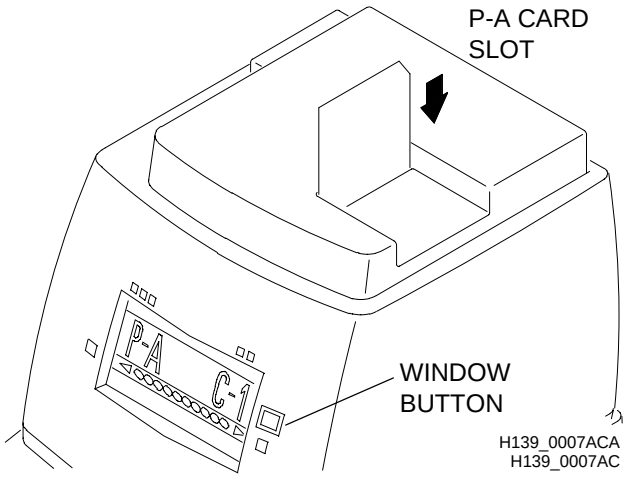
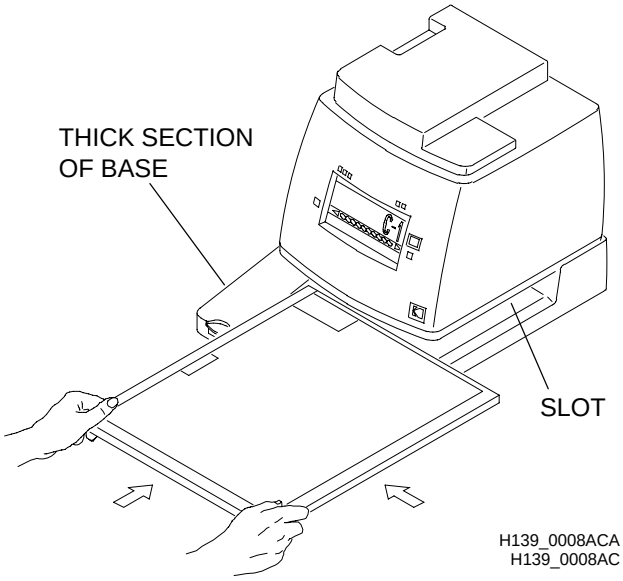


Figure 9 **Models 4L and 4SL with A-P Format Selected**



[2] Choose C-1 WINDOW (for *Kodak X-Omatic* and *Kodaflex* CASSETTES), or C-1N WINDOW (for *Min-R* 2 CASSETTES) by pressing the WINDOW BUTTON. The LCD PANEL will display the WINDOW format chosen for the exposure.

Figure 10 **Inserting a Cassette**



[3] Place a CASSETTE loaded with exposed film on the BASE with the WINDOW in the top left corner.

[4] Keep the left side of the CASSETTE flush with the THICK SECTION of the BASE.

Important

Do not move the CASSETTE during the exposure.

[5] Insert the CASSETTE fully into the SLOT above the BASE.

Note

The entire exposure cycle takes approximately 2 seconds. When you insert a CASSETTE correctly into the SLOT above the BASE, the ID CAMERA automatically:

- Actuates a mechanical ARM to open the WINDOW in the CASSETTE.
- Illuminates a LAMP to record the identification data, time, date, serial number, and A-P/P-A data on the film.
- Closes the WINDOW in the CASSETTE.

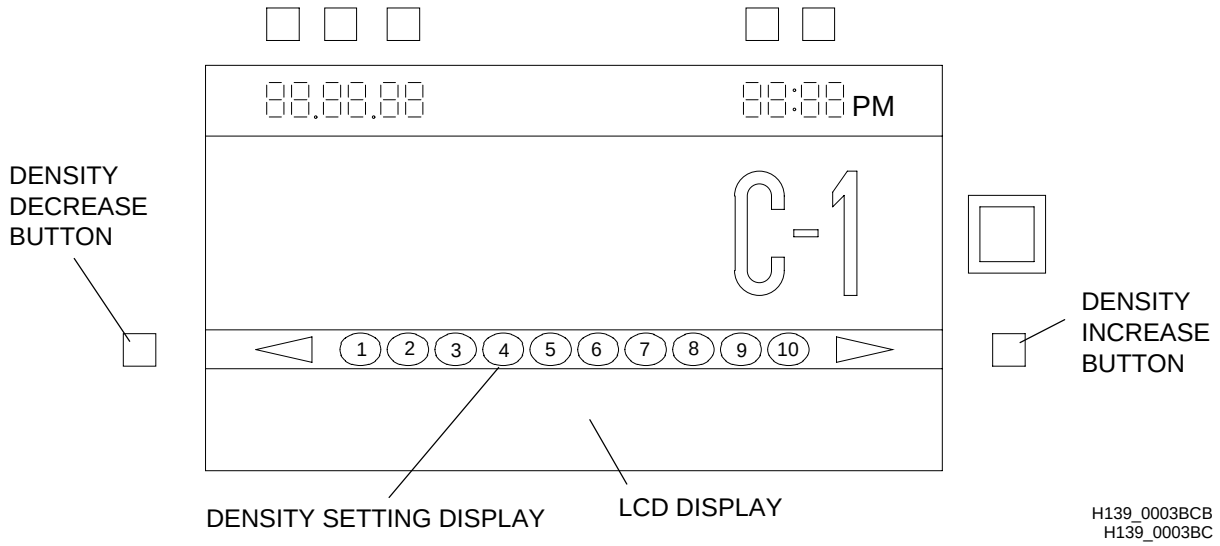
[6] Remove the CASSETTE from the CAMERA after the CAMERA beeps.

[7] Process the film according to the manufacturer's specifications.

Section 3: Adjusting Exposure and Film Image Density

If Image is Too Light

Figure 11 **Adjusting the Density Setting**



[1] Press the DENSITY INCREASE BUTTON to increase the exposure and darken the density of the image on the film.

Important

Only the DENSITY SETTING selected will be displayed on the LCD. The other settings will appear as black circles. Figure 10 shows all the settings to help orient you to the way the DENSITY BUTTONS work, showing the range of settings from 1 (lightest) to 10 (darkest). The DENSITY INCREASE BUTTON features “wrap around” DENSITY SETTINGS. If you press the DENSITY INCREASE BUTTON after Setting 10 is selected, Setting 1 will be selected next, decreasing the density.

Note

You can use the smallest size cassette available when adjusting exposure to reduce the cost of film consumed during this procedure.

[2] Load the CASSETTE with film.

[3] Record the DENSITY SETTING on the ID CARD.

[4] Expose the CASSETTE and process the film.

[5] Repeat Steps 2 through 4, if necessary. Compare the images and select the best DENSITY SETTING. Record the DENSITY SETTING selected, for future reference.

If Image is Too Dark

[1] Press the DENSITY DECREASE BUTTON to decrease the exposure and to lighten the density of the image on the film.

[2] Load the CASSETTE with film.

[3] Record the DENSITY SETTING on the ID CARD.

[4] Expose the CASSETTE and process the film.

[5] Repeat Steps 2 through 4, if necessary. Compare the images and select the best one. Record the DENSITY SETTING selected, for future reference.

Section 4: Troubleshooting Procedures

Troubleshooting Chart

MALFUNCTION	POSSIBLE PROBLEM	ACTION
ID CAMERA does not energize	ID CAMERA has no power:	
	• POWER CORD is damaged	Order a new POWER CORD.
	• ID CAMERA is unplugged	Plug in ID CAMERA.
	• FUSE is blown	Call local service.
	• CIRCUIT BREAKER tripped	Check for power at outlet.
ID CAMERA does not operate with a CASSETTE inserted	CASSETTE is not inserted correctly	1. Insert the CASSETTE fully to the back of the ID CAMERA. 2. Check that the: • CASSETTE Window is facing *up*. • Left side of the CASSETTE is flush with the THICK SECTION on the left side of the BASE. See the figure on Page 8.
	SWITCH is out of adjustment.	Call local service.
	DATE and TIME DISPLAYS are flashing	Check the date and time: • If correct, press and hold the DENSITY INCREASE BUTTON until the display stops flashing, approximately 2-3 seconds. • If not correct, see “Setting the Date and Time” on page 5.
Cassette window unable to open	CASSETTE is damaged	Try a different CASSETTE.
Time is not correct	The CLOCK is not set correctly	Set the CLOCK to the correct time. See the “Setting Date and Time” procedure on Page 5 in this manual.
Patient data is too dark or too light	DENSITY SETTING is not set correctly	1. Use the DENSITY DECREASE BUTTON to lighten the data or the DENSITY INCREASE BUTTON to darken the data. 2. Make another exposure and repeat Step 1. 3. If this does not correct the problem, send in for service. See the warranty information on Page 13 for the address.
Patient data is out of focus	The ID CARD moved during the exposure	1. Repeat the exposure and be sure that the ID CARD does not move during the exposure. 2. If this does not correct the problem, contact the local service representative or send in for service. See the Warranty on Page 13.

Error Code Table

ERROR CODE	POSSIBLE MALFUNCTION	ACTION
E1	No Card in either A-P or P-A Slot	Remove the CASSETTE and put an ID CARD in either the A-P or P-A Slot.
E2	LAMP Failure or FUSE blown or missing.	Contact the local service representative or send in for service.
E3	Cassette Window Failed to Open	Remove the CASSETTE and try a different CASSETTE.
E4	ID CAMERA Failed to Shift to A-P Position Correctly	Contact the local service representative or send in for service.
E5	ID CAMERA Failed to Shift to P-A Position Correctly	Contact the local service representative or send in for service.
E6	ID CAMERA Failed to Change Lens Mechanism Correctly	Contact the local service representative or send in for service.

Section 5: New Equipment Warranty

Kodak warrants the *Kodak X-Omatic* IDENTIFICATION CAMERA, MODELS 4, 4L, and 4SL to operate correctly for one year from date of initial installation, when installed within one year from the date of shipment.

Warranty Repair Coverage

If this equipment does not function properly during the warranty period, Kodak provides repair service which will include any necessary adjustments and/or replacement of parts and return shipping costs necessary to maintain your equipment in good working order.

How to Obtain Service

Should equipment require service, repack equipment in its original packaging and return it to the Reconditioning Center. If you do not have the original packaging, you can order replacement packaging Part No. 699725. See the form entitled “Repair Program for KODAK X-OMATIC Identification Camera, Models 4, 4L, and 4SL” included behind the “MISCELLANEOUS” tab in this binder. If the camera is under warranty, contact your Kodak Account Manager.

Limitations

This warranty does not cover: circumstances beyond Kodak's control; misuse; abuse; any attachments, accessories, or alterations not marketed by Kodak (including service or parts to correct problems resulting from the use of such attachments, accessories or alterations); failure to follow Kodak's operating instructions; or supply items.

Kodak makes no other warranties, express, implied, or of merchantability for this equipment.

Repair without charge is Kodak's only obligation under this warranty.

- *Kodak will not be responsible for any consequential or incidental damages resulting from the sale, use, or improper functioning of this equipment even if loss or damage is caused by the negligence or other fault of Kodak.*
- Such damages for which Kodak will not be responsible, include, but are not limited to, loss of revenue or profit, downtime costs, loss of use of the equipment, cost of any substitute equipment, facilities or services or claims of your customers for such damages.

This limitation of liability will not apply to claims for injury to persons or damage to property caused by the sole negligence or fault of Kodak or by persons under its direction or control.

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Section 6: Publication History

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